

# WPI-CMU Darpa Robotics Team – 2014-2015:

## Project:

WPI competed in the Darpa Robotics Challenge developing robotic disaster response capabilities.

## Outcomes:

WPI's Atlas robot completed 7/8 of the competition tasks. WPI was the only team that did not fall and require a reset.

## Project Role:

Undergraduate Research Assistant. Member of User Interface, robot testing, and robot maintenance teams. Responsible for robot egress hardware and aftermarket sensors.

Atlas Walking Through Door



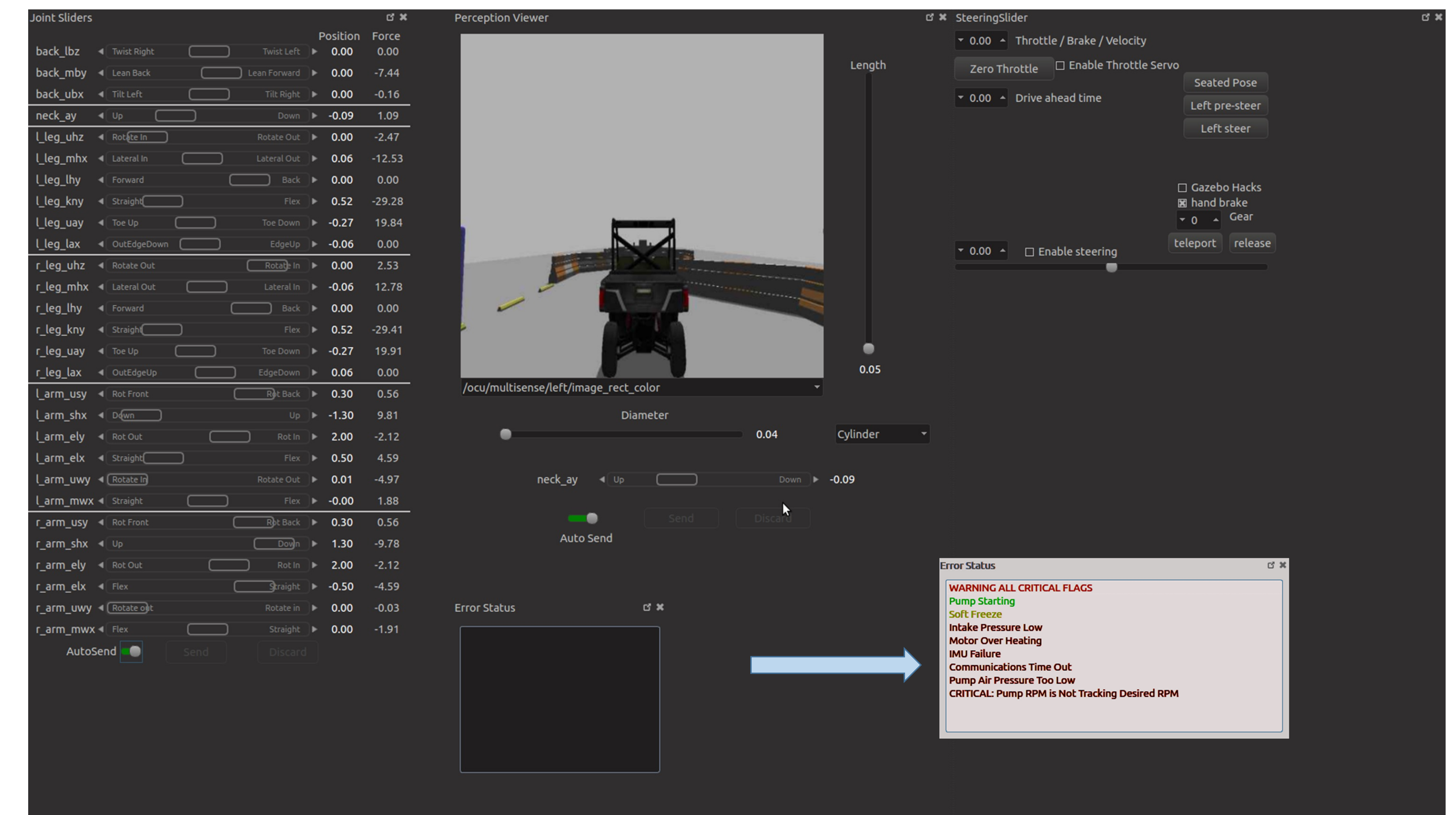
I love my paint job, thanks Aaron!

Also, those cameras on my hands were a great addition, certainly made grabbing the door handle easier

Operator Controlling Robot



My ROS GUI Widgets



### Widgets:

#### Joint Sliders

- Joint sliders display live joint angles and torques
- Sliders also allow user to manually set joint angle
- Angle and torque change color when approaching their limits

#### Error Status

- Parses error codes
- displays human readable critical system faults

#### Perception viewer

- Perception viewer displays selected camera views
- Allows user to move head angle without opening joint sliders widget
- Allows user to set parameters for object selection

#### Steering slider

- widget used for Atlas to drive the car
- The widget was added to include additional features after my initial development

I'm glad my chest is reinforced with fiber glass, and I have the awesome railing and deployable platform. Getting out will be a piece of cake! Falling here would be so embarrassing



Atlas car egress with the help of assistive car additions #NOFALLSNORESETS

My Widgets Located Within the Robot Control GUI

